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EXAMINER	
LEE, ERICA SHENGKAI	

ART UNIT	PAPER NUMBER
3766	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/520,965	AVNI ET AL.	
	Examiner	Art Unit	
	ERICA LEE	3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *8,23 and 26-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-12,14-22,24 and 25* is/are rejected.

7)☒ Claim(s) *7 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 January 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/18/2005; 03/23/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

I. Claims 1-33, drawn to a force sensor device, classified in class 600, subclass 587.

II. Claims 34-38, drawn to a foot stimulation method, classified in class 607, subclass 049.

III. Claims 39-40, drawn to a stimulation method, classified in class 607, subclass 048.

2. The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

3. Inventions (II and III) and (I) are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as

claimed in Group I can be used to practice another and materially different process that does not require activating stimulation of a plurality of muscle groups.

4. Inventions II and III are directed to related processes. The related inventions are distinct if: (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed in Group III can have a materially different function that does not require using a flexible insole of a shoe. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Election of Species

5. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

6. If Group I is elected, the following subspecies exist:

A. Stimulator Type

Species A1: Foot stimulation system (see claims 18-25 and figs. 2A-C)

Species A2: Palm force sensor (see claims 26-29 and fig. 4)

Species A3: Knee stimulation system (see claim 30-33 and fig. 3)

B. Welding Pattern

Species B1: Concentric circles of elliptical welds (see claim 7, figs. 2A-B).

Species B2: Parallel rows of elliptical welds (see claim 8, fig. 2C).

C. Stimulation Level

Species C1: Stimulation is proportional to the pressure measurements (see claim 22).

Species C2: Stimulation is a constant preselected by the user (see claim 23).

7. If Group II is elected, the following species exist:

Species A: Stimulation is proportional to the pressure measurements (see claim 37).

Species B: Stimulation is a constant preselected by the user (see claim 38).

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims

are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

8. The following claim(s) are generic: claims 1-17 are generic for Species A1-A3; claims 1-6, 9-17 is generic for Species B1-B2; and claims 18-21 and 24-25 are generic for Species C1-C2.

9. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species**, including any claims subsequently added. An argument that a

claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

10. During a telephone conversation with Michael Dunnam on September 3, 2009 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-33; Species A1, claims 18-25; Species B1, claim 7; and Species C1, claim 22.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 8, 23 and 26-40 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

11. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

12. Acknowledgment is made of applicant's claim for priority based on an international application PCT/IL03/000572 filed on July 10, 2003. It is noted, however, that applicant has not filed a certified copy of the international application as required by 37 CFR 1.495(b) because the international application has not yet been received from the International Bureau (IB).

13. Receipt of papers is acknowledged for applicant's claim for priority based on an provisional application 60/395,127 filed on July 11, 2002.

Oath/Declaration

14. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because:
> It does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month and year of its filing

15. The provided oath or declaration references PCT International Application Number PCT/IL2003/000572, filed on July 10, 2003 which should state "PCT/IL03/00572".

Drawings

16. The drawings are objected to because reference character 100 directed to a "force sensor system" in [0031] of the specification is not shown in figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

17. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

18. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 recites "wherein said electrical stimulation system uses said input signals to identify specific stages of a gait cycle of the foot". It is unclear how the electrical stimulation system would be used to identify the specific stages of the gait cycle. Examiner interprets claim 17 to read "wherein the input signals from the force sensor system identifies specific stages of a gait cycle of the foot and the electrical stimulation system uses the input signals to activate an electronic orthosis".

Claim Rejections - 35 USC § 102

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

20. Claims 1, 3, 10, 14-16, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Havriluk (US Pat 5,005,140).

21. Regarding claim 1, Havriluk discloses a force sensor system for monitoring weight bearing at a location on a person comprising a plurality of independent, non-overlapping pockets inflated with air 410, 412, 414, 416 (fig. 8), said pockets forming the interior of at least one flexible pouch placed at or near the location (fig. 8); a plurality of tubes, wherein at least one tube allows flow of air in and out of each of the pockets to a location remote from the pouch 426, 428, 430, 432 (fig. 8); and a plurality of pressure sensors remote from the pouch connected to said pockets through said tubes, wherein each pressure sensor is disposed to detect the pressure applied to at least one pocket (col. 6, lines 5-29).

22. Regarding claims 3 and 10, Havriluk discloses the flexible pouch comprises a flexible insole worn inside a shoe (col. 6, lines 13-16), where the flexible insole contains a first inflatable pocket in the heel region and a second inflatable pocket in the forefoot region of the insole 416 and 410 (fig. 8).

23. Regarding claims 14-16, Havriluk discloses each pressure sensor converts received pressure signals to electrical output signals representative of the weight bearing on the location (col. 3, lines 35-36), where the electrical output signals are input signals to an attached control unit of a weight bearing biofeedback system (col. 5, lines 28-44), and the weight bearing biofeedback system generates feedback to the location in response to the input signals (col. 5, line 67 to col. 6, line 4; col. 6, lines 16-22).

24. Regarding claim 18, Havriluk discloses a foot stimulation system capable for use in control of an electronic orthosis comprising a flexible insole worn inside

a shoe containing at least two inflatable pockets positioned in the heel region and the forefoot region, respectively, said pockets forming the interior of the flexible insole and being inflated with air 416 and 410 (fig. 8; col. 6, lines 13-16); at least two tubes allowing flow of air in and out of the respective pockets to a location remote from the insole 426-432 (fig. 8); and at least two pressure sensors remote from the insole connected to the respective pockets through the respective tubes; the pressure sensors disposed so as to detect the pressure applied to the inflatable pockets and converting pressure signals to electrical output signals (col. 6, lines 5-29; col. 3, lines 35-36).

25. Regarding claim 20, Havriluk discloses the inflatable pockets include extensions connecting the insole and the tubes 418-424 (fig. 8).

26. Claims 1-3 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hochberg (US Pat 4,989,615).

27. Regarding claim 1, Hochberg discloses a force sensor system capable for use in monitoring weight bearing at a location on a person, comprising a plurality of independent, non-overlapping pockets inflated with air, the pockets forming the interior of at least one flexible pouch placed at or near the location 30 (fig. 4); a plurality of tubes, where at least one tube allows flow of air in and out of each of the pockets to a location remote from the pouch (fig. 4); a plurality of pressure sensors remote from the pouch connected to the pockets through the tubes,

where each pressure sensor is disposed to detect the pressure applied to at least one pocket (col. 4, lines 6-9).

28. Regarding claim 2, Hochberg discloses the system further comprises a plurality of valves remote from the pockets connected to the pockets through the tubes, the valves open to allow inflation and deflation of the pockets and closing to allow closed system operation of the pockets 34 (fig. 4; col. 4, lines 6-12).

29. Regarding claims 3 and 11, Hochburg discloses the flexible pouch comprises a flexible wrap capable of being worn around a knee or a palm (fig. 4); when worn around a knee, the flexible wrap comprises two adhesive strips capable for tightly securing the wrap on the anterior aspect of the knee joint (col. 3, lines 22-28).

Claim Rejections - 35 USC § 103

30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

31. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hochburg. Hochburg discloses a flexible wrap capable of being worn around a palm comprising two straps 32 (fig. 4) but does not expressly disclose a latch for tightly securing the wrap around the thenar and the hypothenar. However, it is well known in the art to use a latch, such as a belt buckle, in conjunction with two straps, for tightly

securing a wrap around a body part. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hochburg to include the latch to provide a secure attachment of the flexible wrap around the thenar and the hypothenar.

32. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Havriluk in view of Hochburg. Havriluk discloses claimed invention except for at least two valves remote from the insole connected to the inflatable pockets through the tubes, the valves opening to allow inflation and deflation of the inflatable pockets and closing to allow closed system operation of the inflatable pockets. Hochburg teaches a plurality of valves 34 (fig. 4) remote from a wrap and connected to inflatable pockets 30 (fig. 4) through tubes (fig. 4), the valves opening or closing for operation of the inflatable pockets (col. 4, lines 6-12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Havriluk to include the valves as taught by Hochburg in order to provide more sensitivity control over each of the inflatable pockets.

33. Claims 4, 5, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havriluk in view of Toms (US Pat 6,036,660). Havriluk discloses claimed invention but does not disclose the flexible pouch comprises two outer layers of fabric sheets, the outer layers of sheets being welded together in a welding pattern using a sealing agent; where the said sealing agent comprises an RF-weld, and the outer layers of fabric sheets comprise a fabric base and a polyurethane coating. Toms teaches a flexible

pouch comprising two outer layers of fabric sheets comprising a fabric base and a polyurethane coating, the outer layers of sheets being welded together in a welding pattering using an RF-weld sealing agent 5 (fig. 2; col. 4, lines 33-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Havriluk to include the two outer layers of fabric sheets comprised of a fabric base and a polyurethane coating, as well as welding together the fabric sheets using an RF-weld sealing agent as taught by Toms in order to provide a more air tight structure and resistance to deformation from air pressures (col. 4, lines 34-38).

34. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Havriluk in view of Toms and in further view of McEwen et al. (US PG Pub 2003/0036771 A1). Havriluk in view of Toms discloses claimed invention except for the outer layers of fabric sheets comprise a fabric base and a polyvinylchloride coating. McEwen et al. discloses a gas filled bladder formed from polyester fabric with a polyvinylchloride coating ([0050], lines 10-16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Havriluk to include the polyvinylchloride coated fabric as taught by McEwen et al. in order to provide a flexible gas impermeable bladder layer.

35. Claims 15, 17, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havriluk in view of Goldman (US Pat 5,775,332).

36. Regarding claim 15, Havriluk discloses the electrical output signals are input signals to a device (col. 5, lines 28-44), but does not expressly disclose the

electrical output signals are input signals to an attached control unit of an electrical stimulation system. Goldman teaches a weight sensing device with an associated electronic module that provides electrical stimulation (col. 12, lines 19-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Havriluk to include the electrical stimulation system as taught by Goldman in order to provide feedback to the patient about the amount of weight bearing occurring, and to help the patient maintain safe weight bearing (col. 7, line 65 to col. 8, line 8).

37. Regarding claim 17, Havriluk discloses the input signals identify specific stages of a gait cycle of the foot (col. 7, lines 16-21) but does not expressly disclose the electrical stimulation system uses the input signals to activate an electronic orthosis. Goldman teaches it is well known in the art to associate an electronic orthosis with a force sensor system, and to use electronic cues from the sensor system to activate the electronic orthosis (col. 8, lines 20-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Havriluk to include an electronic orthosis as taught by Goldman in order to provide better ambulation in patients (col. 8, lines 27-29).

38. Regarding claim 21, Havriluk discloses claimed invention except for a stimulator that delivers stimulation to a foot; and a controller that receives said electrical output signals from said pressure sensors as input signals, said controller activating said stimulator to deliver stimulation to a first muscle group in response to input signals from the heel pressure sensor and activating said

stimulator to deliver stimulation to a second muscle group in response to input signals from the forefoot pressure sensor. Havriluk however, teaches two inflatable pockets positioned in the heel region and the forefoot region, for independent force detection of the heel and the forefoot 416 and 410 (fig. 8) and that the specific information sensed from the transducer is converted to electrical signals (col. 4, lines 16-17; col. 3, lines 35-36) and is sent to a device for processing the signals (col. 5, lines 28-44). Goldman teaches a stimulator that delivers stimulation to a foot (col. 12, lines 19-33) and also teaches stimulation in response to specific types of weight bearing (col. 12, lines 15-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Havriluk to include the stimulator as taught by Goldman in order to provide feedback to the patient about the amount of weight bearing occurring, and to help the patient maintain safe weight bearing (col. 7, line 65 to col. 8, line 8), and furthermore to include a controller for the activation of the stimulator capable of delivering stimulation to different muscle groups in response to different types of weight bearing as taught by Goldman in order to provide detailed feedback to the patient about the type of weight bearing occurring.

39. Regarding claim 22, Havriluk discloses claimed invention except for the degree of stimulation by the stimulator is proportional to the pressure measurements obtained by the pressure sensors. Goldman teaches the degree of stimulation to the patient can increase in intensity with weight increase (col. 12, lines 56-58). It would have been obvious to one of ordinary skill in the art at

the time the invention was made to modify Havriluk to include the relationship between the stimulation and pressure measurements as taught by Goldman in order to better notify the patient of different degrees of weight bearing.

40. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havriluk in view of Goldman and Vredenbregt et al. (US Pat 3,881,496). Havriluk in view of Goldman discloses claimed invention except for the first muscle group is the anterior muscles of the tibia, and the second muscle group is the posterior muscles of the tibia. Vredenbregt et al. teaches that electrical stimulation of muscular groups is performed to approach the natural function of the muscles for ambulation (col. 1, lines 44-46). Vredenbregt et al. also teaches stimulating muscles based on weight bearing (abstract, col. 2, lines 3-19). Vredenbregt et al. does not expressly disclose that the stimulated muscular groups are the anterior and posterior muscles of the tibia in response to input signals from the heel and forefoot pressure sensors, respectively, but it is well known in the art that the anterior and posterior muscles of the tibia function to invert the foot and stabilize the lower leg and ankle during ambulation. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Havriluk to include the anterior and posterior muscles of the tibia as the stimulated muscle groups in response to input signals from the heel and forefoot pressure sensors, respectively, in order to better facilitate the natural function of the muscle groups for ambulation as taught by Vredenbregt et al.

Allowable Subject Matter

41. Claims 7 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERICA LEE whose telephone number is (571)270-1480. The examiner can normally be reached on Monday through Friday, 8:30am-6pm, EST; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl H. Layno can be reached on (571)272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ERICA LEE/
Examiner, Art Unit 3766

/Carl H. Layno/
Supervisory Patent Examiner, Art Unit 3766